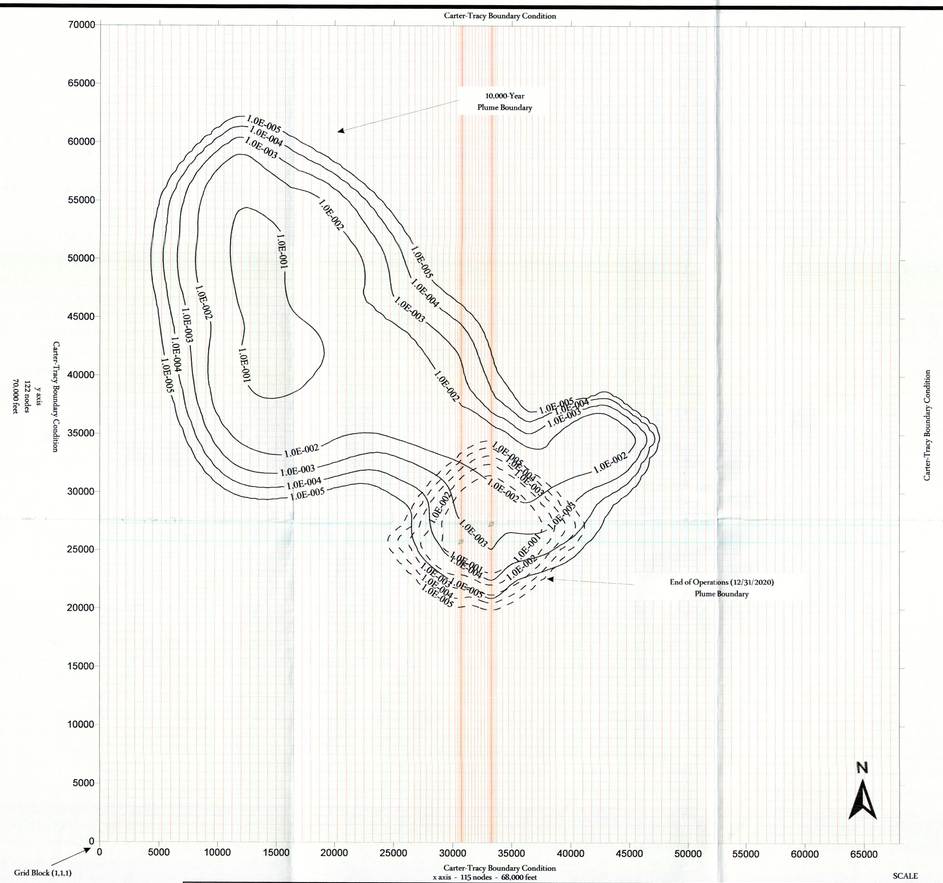
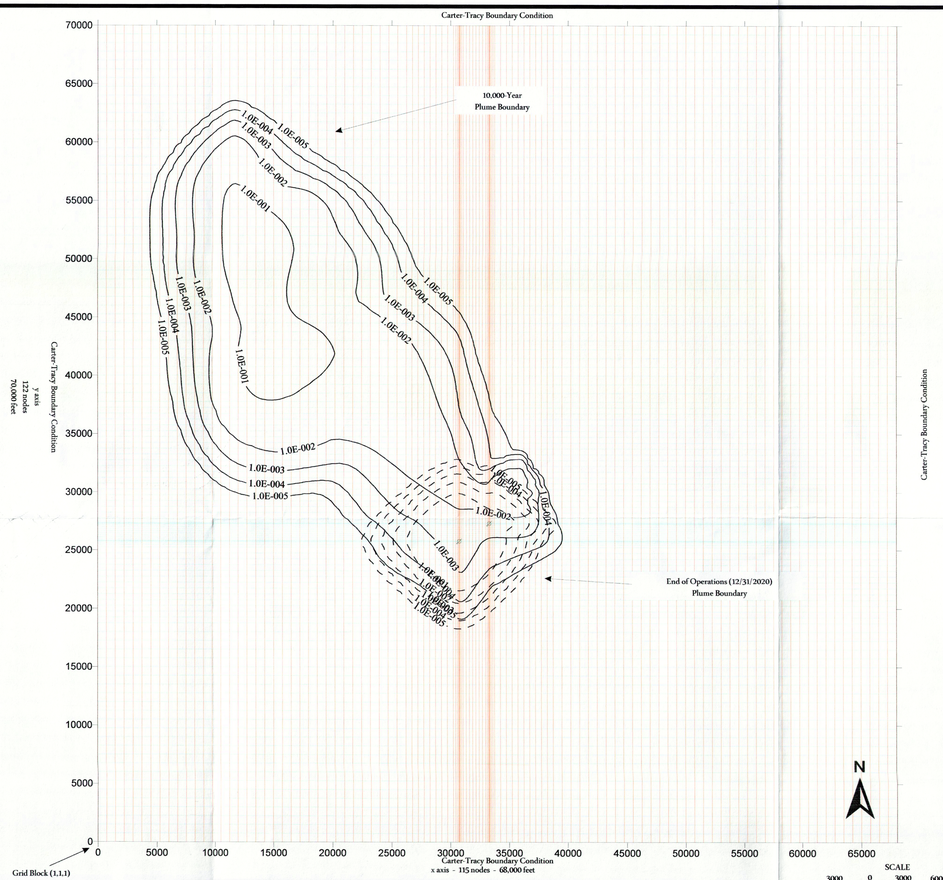


SWIFT Input File No.:	Model Run Description	Input Parameters	Parameter Value
ExMob_AB.dat	Models waste plume migration for 10,000 years in Frio A/B Sand. End of operations on 12/31/2020. Historical injection from July 1, 2008 until December 31, 2008 at 700 gpm into WDW-397. Future injection from January 1, 2009 until December 31, 2009 at 1,200 into WDW-397.	Reservoir Flow Capacity	250,000 mD-ft
		Hydraulic Conductivity	11.832 ft/day
		Intrinsic Permeability (k)	2,000 mD
		Porosity	0.28
		Reservoir Thickness (h)	125 ft
		Reservoir Dip	variable structure
		Injectate Density	61.38 lb/ft^3@ 173 °F
		Injectate Specific Gravity	1.00 @ 60 °F
		Injectate Viscosity*	0.353 cP @ 173 °F
		Reservoir Brine Density	66.65 lb/ft^3@ 173 °F
		Reservoir Brine Specific Gravity	1.091 @ 60 °F
		Reservoir Brine Viscosity*	0.495 cP @ 173 °F
		Ground Water Flow Rate	0.0 ft/yr
		Rock Compressibility	3.20 x 10^{-6} psi^{-1}
		Fluid Compressibility	2.39 x 10^{-6} psi^{-1}
		Reservoir Temperature	173 °F
		SWIFT Effective Diffusion Coefficient	8.24 x 10^{-4} ft^2/day
		Longitudinal and Lateral Dispersivity	100 ft and 10 ft

* variable viscosity with temperature from 60 °F to 200 °F

MODEL RESULTS SUMMARY: The end of operation waste plume is ovoid in shape. The end of operations waste plume (12/31/2020) is approximately 16,700 feet long and approximately 14,600 feet wide. The injected waste plume extends 41,300 feet up-gradient toward Clinton Dome, approximately 15,500 feet up-gradient toward the northeast, and 7,100 feet down-gradient from the WDW-397 injection well and is approximately 26,700 feet wide at its widest point after 10,000 years.



SWIFT Input File No.:	Model Run Description	Input Parameters	Parameter Value
ExMob_AB_398.dat	Models waste plume migration for 10,000 years in Frio A/B Sand. End of operations on 12/31/2020. Historical injection from July 1, 2008 until December 31, 2008 at 700 gpm into WDW-397. Future injection from January 1, 2009 until December 31, 2009 at 1,200 into WDW-398.	Reservoir Flow Capacity	250,000 mD-ft
		Hydraulic Conductivity	11.832 ft/day
		Intrinsic Permeability (k)	2,000 mD
		Porosity	0.28
		Reservoir Thickness (h)	125 ft
		Reservoir Dip	variable structure
		Injectate Density	61.38 lb/ft^3@ 173 °F
		Injectate Specific Gravity	1.00 @ 60 °F
		Injectate Viscosity*	0.353 cP @ 173 °F
		Reservoir Brine Density	66.65 lb/ft^3@ 173 °F
		Reservoir Brine Specific Gravity	1.091 @ 60 °F
		Reservoir Brine Viscosity*	0.495 cP @ 173 °F
		Ground Water Flow Rate	0.0 ft/yr
		Rock Compressibility	3.20 x 10^{-6} psi^{-1}
		Fluid Compressibility	2.39 x 10^{-6} psi^{-1}
		Reservoir Temperature	173 °F
		SWIFT Effective Diffusion Coefficient	8.24 x 10^{-4} ft^2/day
		Longitudinal and Lateral Dispersivity	100 ft and 10 ft

* variable viscosity with temperature from 60 °F to 200 °F

MODEL RESULTS SUMMARY: The end of operation waste plume is ovoid in shape. The end of operations waste plume (12/31/2020) is approximately 16,500 feet long and approximately 14,500 feet wide. The injected waste plume extends 42,500 feet up-gradient toward Clinton Dome and 5,400 feet down-gradient from the WDW-398 injection well and is approximately 26,000 feet wide at its widest point after 10,000 years.

PLATE 7-16

TERRA DYNAMICS INC

LATERAL MIGRATION MODEL GRID AND RESULTS (ExMob_AB & ExMob_AB_398)) (Frio A/B Sand Lateral Migration Model)

PREPARED FOR:

EXXON MOBIL CORPORATION PASADENA, TEXAS

DRAWN BY:	tdm	SCALE:	DATE:
DESIGNED BY:	SAME	As Indicated	02-15-2011
CHECKED BY:	T. Moody	JOB NO.	11-101